US Army Corps of Engineers

SAN FRANCISCO DISTRICT

PUBLIC NOTICE

NUMBER: 28392S DATE: 17 February 2004

RESPONSE REQUIRED BY: 8 March 2004

Regulatory Branch
333 Market Street
San Francisco, CA 94105-2197

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Deepwater Slough Island Mitigation Bank

1. Pacific Shores Development, LLC, 350 California Street, Suite 1905, San Francisco, CA 94104, (contact: Mr. Skip Spaulding, Farella Braun+Martel, LLP, [415] 954-4918) proposes to continue to use and operate the Deepwater Slough Island mitigation bank located in the Bair Island complex in Redwood City, San Mateo County, California for the purpose of selling mitigation credits to third parties to compensate for adverse impacts to wetlands and other aquatic resources.

2. On April 21, 1999, the U.S. Army Corps of Engineers ("Corps") issued an individual permit (No. 16783S) to Pacific Shores Center, LLC ("Pacific Shores") to construct the Pacific Shores Center Project. Pacific Shores Development, LLC is the current owner of the Pacific Shores Center Project and has succeeded to all of the rights and obligations of Pacific Shores Center, LLC. As mitigation for the development of the project, Pacific Shores acquired Deepwater Slough Island from the Port of Redwood City and was required to construct/restore 22 acres of tidal salt marsh habitat on the island by removing dredged material and implementing additional hydrological enhancements in portions of the island that had been adversely affected by the previous dredged material disposal. Originally 8 to 10 acres of upland on the island were to be retained and enhanced. However, in response to requests by the U.S. Fish and Wildlife Service and others, the 8 to 10 acres of upland were converted to wetlands in order to minimize potential denning habitat for the introduced red fox. This additional restored wetland acreage was authorized in the Corps permit and authorizations from the State Water Resources Control Board, San Francisco Bay Conservation and Development Commission (Permit No. 21-98), and U.S. Fish and Wildlife Service (Biological Opinion, October 9, 1998, 1-1-98-F-52) to be available for "banking purposes" for sale and use by other approved third party users requiring offsite mitigation.

Deepwater Slough Island is located in the Bair Island complex in San Mateo County, California (Figure 1). This island is approximately 140 acres and was used extensively from the 1930s through the mid-1960s for disposal of dredged materials from Redwood Creek. Approximately 30 acres of tidal marsh had been buried by spoils up to 10 feet in depth and were colonized by upland vegetation dominated by exotic invasive plants such as wild fennel, ripgut brome, soft chess, Italian thistle, and Australian saltbush. The remainder of the island was also severely impacted by dredged material and fines washing out from the spoil mounds. Marsh vegetation was buried or eliminated, and tidal channels had been filled in or were blocked by diking and/or sedimentation. Although there had been some revegetation since the mid-1960s, the process had been slow, and the marsh vegetation which had developed was lower than normal vegetation height, cover density and exhibited poor vertical structural development likely due to the lack of tidal circulation, salt buildup, and the lack of nutrient input as a result of poor tidal circulation. Marsh revegetation also appeared to have slowed considerably, possibly reaching equilibrium with the altered tidal regime on the interior portions of the island. Although marsh conditions were not optimum, the salt marsh harvest mouse (*Reithrodontomys raviventris raviventris*), a federal and state listed endangered species, and the salt

marsh wandering shrew (*Sorex vagrans halicoetes*), a species of concern, have been documented on the island.

Restoration on Deepwater Slough Island began on May 23, 2000 and was completed on September 13, 2000. Approximately 142,000 cubic yards of dredged material was removed from the island and approximately 10,477 feet of channel were excavated, creating elevations suitable for restoration of 30.2 acres of intertidal salt marsh habitat and restoring more natural tidal influence to the interior portions of the island (Figure 2). Performance monitoring reported for the first two growing seasons indicate that the restoration of the marsh habitat on the island is generally meeting or exceeding performance criteria, and are demonstrating positive trends toward meeting the mitigation goals outlined in the original Deepwater Slough Mitigation and Monitoring Plan. Monitoring results relative to the performance criteria for restoration area in which the mitigation bank credits are located are summarized as follows:

Tidal Elevations - Target inundation periods have been achieved within the restored marsh area.

Channel Stability - Excavated tidal channels are slowly evolving as predicted, developing hybrid cross-sections. Sediment has been deposited in the constructed 4th and 3rd order channels. First and 2nd order channels are developing naturally throughout the graded marsh plain and existing marsh areas. This is increasing tidal circulation in the interior portions of the island.

Marsh Wetland Vegetative Cover –The native component of the restored marsh is 97 percent, which exceeds the Year 3 performance criterion of 70 percent.

Community Similarity - The restored marsh has a community similarity value of 0.97 in relation to the reference area. This exceeds the Year 2 performance criterion of 0.20.

Total Plant Cover - Total plant cover has increased steadily from no cover in Year 0 (post construction) to 23.2 +/- 4.2 percent in the restored area through the third growing season.

Productivity – Above ground phytomass increased by a large margin in both the restored marsh and enhanced barren area.

Soil Organic Matter - There was a slight increase in soil organic matter in the restored marsh.

Faunal Populations - In Year 3, bird species richness was higher in the restored marsh than in the reference marsh during the winter, but equal during the spring. Species diversity was higher in the restored marsh during both seasons.

Although habitat conditions in the restored marsh have not yet achieved sufficient cover for native marsh species such as the salt marsh harvest mouse or Alameda song sparrow (performance criteria for use by these species is Year 5), California clapper rail (*Rallus longirostris obsoletus*), a federal and state endangered species, have also been heard calling on the island in 2003. Previous surveys conducted in 1993, and between 2000 and 2002, had not detected this species.

Although the Corps authorized Pacific Shores in their original permit to use the 8.2 acres of constructed/restored tidal marsh that exceeded the Pacific Shores Center's mitigation requirements, the Corps of Engineers has requested that Pacific Shores enter into a Mitigation Banking Enabling Instrument (BEI) to formalize the operation of the bank in accordance with federal Mitigation Banking Guidance (60 FR. 58605 *et seq.*). To date, 1.1 acres of credits have been purchased/authorized for use by third party users.

3. The Corps of Engineers is soliciting comments from the public, Federal, State and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this activity. The Corps will give any comments received full consideration during the development of the final banking instrument.

4. Interested parties may submit, in writing, any comments concerning this activity. Comments should include the applicant's name and the number and the date of this Public Notice, and should be forwarded so as to reach this office within the comment period specified on Page 1. Comments should be sent to the U.S. Army Corps of Engineers, San Francisco District, Regulatory Branch, 333 Market Street, San Francisco, California 94105-2197. It is the Corps' policy to forward any such comments that include objections to the applicant for resolution or rebuttal. Additional details may be obtained by contacting the applicant whose name and address are indicated in the first paragraph of this Public Notice or by contacting Bob Smith of our office at telephone 415-977- 8450 or E-mail: rsmith@spd.usace.army.mil.